

CLAIMS

What is claimed is:

5       1. An oxylated, diimidazole compound produced from reacting peroxyoxalates with a methylimidazole said oxylated, diimidazole further reacting with hydrogen peroxide to produce an unstable, high energy molecule capable of transferring energy to maximize the rate of attaining chemiluminescence in a fluorophore.

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2. The oxylated compound of claim 1 wherein said methylimidazole is 2MImH.

15       3. The oxylated compound of claim 1 wherein said methylimidazole is 4MImH.

4. The oxylated compound of claim 1 wherein said unstable, high energy molecule is formed from reacting OD2MI with hydrogen peroxide.

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5. The oxylated compound of claim 1 wherein said unstable compound, high energy molecule is formed from reacting OD4MI with hydrogen peroxide.

25       6. The oxylated compound of claim 1 wherein the peroxyoxalate is bis(trinitrophenyl)oxalate (DNPO).

7. The oxylated compound of claim 1 wherein the peroxyoxalate is bis(2,4,6-trichlorophenyl)oxalate (TCPO).

8. The oxylated compound of claim 1 wherein the  
5 peroxyoxalate compound is bis(pentachlorophenyl) oxalate (PCPO).

9. A high energy, unstable molecule formed from reacting one of the group consisting of OD2MI and OD4MI with hydrogen peroxide.

10. A method to produce a methyl substituted molecule comprising the steps of: adding a quantity of 2-methylimidazole in an acetate solvent to a quantity of bis(2,4,6 trichlorophenyl) oxylate thereby yielding a methyl substituted oxylate, then reacting said methyl substituted oxylate with a quantity of  
15 hydrogen peroxide thereby producing a high energy, unstable molecule, and finally collecting said high energy, unstable molecule for use to provide energy for fluorescence.

11. The method of claim 10 wherein the pH is in the range of  
20 5.5 to 10.5.

12. The method of claim 10 wherein said methyl substituted molecule is OD2MI.

25 13. The method of claim 10 wherein said methyl substituted molecule is OD4MI.